

## WHAT IS CLAIMED IS:

1. A high-voltage transformer comprising:
  - a core having a central axis;
  - a bobbin having a hole for holding the core and at least three winding grooves arrayed along the central axis of the core;
  - primary coils wound around outermost winding grooves among said at least three winding grooves; and
  - a secondary coil wound around a winding groove other than the outermost winding grooves, the secondary coil being connected to diodes at both ends.
2. A high-voltage transformer according to Claim 1, wherein the diameter of the hole for holding the core increases from a center thereof to both ends of the secondary coil.
3. A high-voltage transformer according to Claim 1, wherein the core is a horseshoe-shaped ferrite core with a substantially square sectional configuration.
4. A high-voltage transformer according to Claim 1, wherein a plurality of flanges are arrayed along the central axis of the core to define the at least three winding grooves.
5. A high-voltage transformer according to Claim 4, wherein nine of the flanges and eight of the winding grooves are provided.
6. A high-voltage transformer according to Claim 4, wherein the flanges are substantially square shaped.
7. A high-voltage transformer according to Claim 4, further comprising bases disposed on two outermost flanges of the plurality of flanges.

8. A high-voltage transformer according to Claim 7, wherein the bases include terminals disposed thereon.

9. A high-voltage transformer according to Claim 1, further comprising a case accommodating the core, the bobbin, the primary coils and the secondary coil.

10. A high-voltage transformer according to Claim 9, wherein the case includes epoxy resin disposed therein.

11. A high-voltage transformer according to Claim 1, wherein a vertical section of the hole in the bobbin for holding the core includes taper sections having that increase from a center to both ends of the secondary coil.

12. A high-voltage transformer according to Claim 11, wherein the vertical section of the hole in the bobbin for holding the core includes substantially cylindrical sections following the taper sections.

13. A high-voltage transformer according to Claim 1, wherein the winding grooves near the center of the core are deeper than the winding grooves located near both ends of the core.

14. A high-voltage transformer according to Claim 1, wherein a plurality of ribs are arranged to protrude from inner surfaces of the bobbin toward surfaces of the core.